

UTTAR BANGA KRISHI VISWAVIDYALAYA
PUNDIBARI, COOCH BEHAR-736165, WEST BENGAL

Short Tender Notice No. UBKV/03/2007-ICAR

Sealed quotations are invited from bonafied and experience manufacturer/individual supplier for supply of equipments and works within 2 p.m. of 21.03.2007.

Date of presentation at UBKV, Pundibari on 21-23 March, 2007 (A-F [Sl. No. 1-66] & K, L, M [Sl. No. 55 to 103]).

Works: Computerization and networking for campus wide connectivity on fiber and structured cabling and Internet Security solutions, on turnkey basis. Interested bidders may visit the site of work before 21st March, 2007. For details please see below:-

Name of the instruments:

A. For the research on Pesticide Residue and Mitigation:

Sl. No.	List of the equipments	Justification
1.	Microwave assisted digestion and extraction Unit with all accessories and one fume hood	Sample preparation for pesticide residue analysis and organic synthesis.
2.	Solid Phase Extraction (including cartridges and all accessories)	Extraction and clean up of pesticide residues
3.	Gel Permeation Chromatography (including column materials, all accessories)	Extraction and clean up of pesticide residues
4.	FT-IR with all accessories	Molecular characterization of metabolites and bioactive natural products
5.	Presurised Solvent Extraction System	Extraction of pesticide residues and secondary metabolites of natural sources
6.	Ultra Performance liquid chromatography with all accessories	Clean up of pesticide residues and natural products
7.	Fermenter (for microbial product)	Mass production of bioactive secondary metabolites from microbial sources

Sl. No.	List of the equipments	Justification
8.	Microwave assisted Organic synthesis	Synthesis of pesticide metabolites and bioactive organic compounds
9.	Fumehood	Carry out reactions in this chamber to avoid fumes
10.	UPS (5 /3/2 KVA)	
11.	Dehumidifier	Required for each cubicles of size 14'x10'x8' No. of cubicles : 8 Dehumidification should be made centrally or individually.
11.a.	Glass goods	Borosil
11.b.	Chemicals	SRL, Merck, Aque Standard

B. For Bio Technological Research :

Sl. No.	List of the equipments	Justification
12.	Particle bombardment delivery system with helium gas cylinder, vacuum pump dual pressure with 5 KVA UPS.	For transgenic research
13.	Vacuum blot transfer system	For southern, northern, western hybridization
14.	Gel drying system with vacuum pump and 5 KVA UPS	For southern, northern, western hybridization
15.	Large Sequencing Gel with power pack	For southern, northern, western hybridization
16.	Hybridization oven	For southern, northern, western hybridization
17.	Microtome	For ultra sectioning of plant samples/ tissue culture materials
18.	Stereo microscope with software for chromosome analysis	For microscopic studies
19.	Cold (4°C) cum dark room	For carrying out the experiments at 4°C

C. For Soil Fertility and organic farming research:

Sl. No.	List of the equipments	Justification
20.	pH meter	
21.	Flame photometer	
22.	Visible spectrophotometer	
23.	Conductivity meter	
24.	Single and Double glass distillation set	
25.	Mechanical shaker (rotary and horizontal)	
26.	Auger (dutch type)	For different depth of soil (10,15,20,30,40 and 50 cm.)
27.	Water Vacuum suction pump	

Sl. No.	List of the equipments	Justification
28.	Computer	
29.	Wooden mortar and pestle	
30.	Auto titrator	
31.	Remi orbital shaking incubator	BOD and above ambient temperature
32.	Sieving set	For soil sieving of different mesh
33.	Plant root sampler	
34.	Quartz double distillation set	All quartz parts
35.	Hot air oven	
36.	Water testing kit	
37.	Hot plate	
38.	Centrifuge	Remi R-24

D. For Post harvest technology and value addition Research:

Sl No.	Instruments	Justification
39.	Thermal Property Analyzer	To measure the thermal properties, Thermal conductivity, diffusivity, resistivity
40.	Pycnometer, Specimen volumes from 2 to 135 cubic centimeters, Specimen cell volumes of 4.5, 10, 50, and 135 cubic centimeters, Accuracy better than +/- 0.03% Reproducibility better than +/- 0.015% , Self-calibrating with calibration values permanently maintained in memory until recalibration	For measuring density of apparent and actual density of fruit sample.
41.	Fruit pressure tester penetrometer with capacity x graduation (1000 gf x 10 gf), (5 kgf x 50 gf), (14 kgf x 100 gf) and (20 kgf x 200 gf) and different probe of 3, 6, 8, 11mm dia tip.	Measuring ripeness of fruits and vegetables
42.	Brookfield synchroelectric Viscometer - Continuous display of Viscosity (cP or mPa.s), Temperature (°C or °F), Shear Rate, Shear Stress, % Torque, Spindle Torque measurement accuracy: 1% of full scale range. Repeatability: 0.2% of full scale range for measuring rheological properties of liquid foods	Viscosity measurement of liquid food sample
43.	Halogen Moisture Analyzer, Minimum sample wt of 0.1 g; temp range - 50-200°C readability 0.01%	Fast measurement of moisture content of food sample
44.	Bench top fermentor with 5 ltr autoclavable glass vessel and control for pH, DO gas foam etc.	For production of high value compounds from organic waste.
45.	Data logger and Data acquisition	Data acquisition & storage, Prefix temp, air velocity etc.
46.	Automatic bomb calorimeter	For determining calorific value of food sample.

47.	Ultrasonic homogenizer	Sample preparation
48.	Automatic refractometer, Refractive Index Range: 1.32-1.70 , Brix Range: 0-95 Resolution: 0.0001 RI, Electronic Heating and Cooling facility for temperature range of 10°C - 70°C.	Measuring purity of sugar, essential oil sample.
49.	Rotary vacuum evaporator	Sample preparation
50.	Particle size analyzer for food items, microprocessorbased, measuring range 0.02-2800 micron.	Measuring particle size distribution of powdered sample
51.	Rotational rheometer	For studying Rheological properties of liquid food sample
52.	Dissolve oxygen meter	

E. For Water Management Research:

Sl. No.	List of the equipments	Justification
53.	Pressure Plate Apparatus /Assembly	
54.	Infrared Thermometer	To measure the canopy temperature and canopy temperature depression.
55.	Plant Water Status Console	To measure the leaf / shoot water potential.
56.	Open Pan Evaporimeter	To measure the pan evaporation.
57.	Parshall flume	For measuring the rate of flow in field channel irrigation.
58.	Solarimeter	
59.	Mini Rain Fall Simulator	
60.	Hydraulic Conductivity Test Kit	To measure the soil hydraulic conductivity
61.	Root Washing Equipments	To wash out the soil from the root of the plant sample
62.	Guelph Permeameter	To measure the soil permeability
63.	Surface Moisture Density Probe	To measure the soil moisture in situ.
64.	Permeameter	To measure soil water permeability by constant head as well as by falling head method (closed system, one point measuring bridge with 10 ring holders for soil sample ring diameter 53 as well as 60 mm to measure soil water permeability by constant head as well as by falling head method)
65.	Sample ring kit	To collect undisturbed soil core samples for permeability test (standard set to a depth of 2 m. For soil sample rings diam. 60 mm to collect undisturbed soil core samples for permeability test.)

F. For MSP Project:

Sl. No.	List of the equipments	Justification
66.	Computerised seed drier	Commercial type for field crops.

OTHERS

List of Equipment /Instruments

G.

1.	Increment Presslers Borer (30 cm),	Any good make
2.	Aluminium Ladder, double legged (20')	Any good make
3.	Soil Thermometer, dial type 25 cm stem,	AIC make/ Any good make
4.	Humidifier spot type with .75 HP model, 3 phase 400-440 volt, 2000 to 2400 cfm, evaporating approx. 30-40 ltrs of water per hour	T & I/ Any good make
5.	Axial Flow Fan , 36" dia, 2-3 Hp motor, 12000-15000 cfm at ½ " wgh	T & I/ Any good make
6.	Tray Drier: inner chamber dimension: 3 x 2.5 x 2.5 ft, SS tray: 7 nos to fit in above chamber, doubled walled suitable for drying tea	Any good make
7.	Platform Balance, max. 30 kgs,	Make: SUMO/ any good make
8. a.	Seed Germinator	Any good make
8. b.	Digital Caliper	Milo Toyo make or any good make
9.	Lux meter	Any good make
10.	Pizometer	Any good make
11.	Whit Stone Bridge	Any good make
12.	Stage level recorder (Digital)	Any good make
13.	Sediment Sampler with Accessories	Any good make
14.	Grain polisher	Any good make
15.	BOD	Any good make
16.	Rock box and mineral box (GSI)	Any good make
17.	Leonard Jar made of glass	Any good make
18.	Glass incubation vessel (500 ml capacity)	Any good make

H.

Sl. No.	Name of the Items	Make/Model/Specification
19.	Sprayer 16 ltrs	Aspee
20.	Hose pipe	Any good make
21.	Lawn Mower (Diesel operated / Electric operated)	Any good make
22.	Pedestal Fan,	Khaitan, Merlin Monroe
23.	Fire extinguisher big size for different floor (Fireshield-4.5 kg capacity, CO ₂ type conforming to IS-2878), Small size for laboratories	(Fireshield- BCF Halone - 1211, 2 kg capacity)
24.	Calculator	ORPAT/ Any good make
25.	Emergency light	PHILIPS/ Any good make
26.	Wall clock	ORPAT/ Any good make
27.	Torch light	EVEREADY/ Any good make
28.	Leger torch	Any good make
29.	Lamination Machine	Any good make
30.	Chair with cushion	Supreme Orneto
31.	Exhaust fan	Any good make
32.	Revolving chair	Any good make

I. ELECTRICAL ITEMS

Sl. No.	Name of the Items	Make/Model/Specification
33.	Tube Light 4ft	PHILIPS / Any good make
34.	Choke for tube light & sodium vapour lamp	Any good make
35.	Bulb- 100 watt	Any good make
36.	Starter for tube	PHILIPS/ Any good make
37.	Switches, Regulator for fan	Do

J. STATIONARY ITEMS

Sl. No.	Name of the Items	Make/Model/Specification
38.	Photo paper 130 GSM, 185 GSM	Dismat
39.	Transparency sheet A4 size	
40.	Envelop A4 size with inner polythene coating	
41.	Envelop 25 cm x 11 cm	
42.	White board Marker- Red/Blue/Green/Blue	
43.	Stamp pad	Fabre castle
44.	Permanent glass Merker	
45.	White Board Merker	
46.	Sponge, duster for white Board	
47.	Spiral Binder	
48.	Battery charger (A4 size)	
49.	A.A. size Rechargeble Battery	
50.	Gel Pen	
51.	Permanent marker	
52.	Cushion	
53.	Towel	
54.	Channel Binder	

K. LIST OF COMPUTER AND ACCESSORIES

Sl. No.	Items	Make
55.	Desktop Computer with all Accessories (TFT/CRT monitor)	i) Lenevo Desktop 3000H (8823 8AQ) ii) Lenevo Desktop 3000H (8823 3AQ) iii) HP-Compaq Presario SR1931IL Desktop iv) HP-Compaq Presario SG2070IL Desktop v) HP-Compaq Presario D290 and other updated model
56.	Laptop computer	i) HP Pavillion dv2119TX ii) Lenevo 3000 Y500 (7761-2BQ) iii) Lenevo 3000 Y500 (7761-5AQ) and other updated model
57.	A3 scanner	HP and/or other good make
58.	A4 Scanner	HP and/or other good make
59.	DeskJet Colour Printer	HP/Epson/Canon
60.	UPS for the computer	Epoch/APC/Any good make

Sl. No.	Items	Make
61.	External Hard Disk with case, USB port and firewire 40 GB, 80 GB (with three partition)(2)	Hitachi/any good make
62.	Fire Wire(1)	Any good make
63.	Firewire port with cord(1394 port)(1)	Any good make
64.	HP- ink cartridge(20)	HP-12A,15A,56,57, 56A,57A
65.	HP- ink cartridge for Colour Laser Printer (2)	
66.	HP- ink cartridge for Photo printer 8700(1 set)	HP-857, HP-101, HP-102
67.	HP Pavilion Notebook (Model Name – DV2119TX)(1)	HP
68.	Laser Printer (Print A3 / A4 size paper) (2)	HP/Epson/CANON
69.	Pen Drive (512 MB to 1 GB)	ODYSSEY/TRANSEND/Any good make
70.	Plotter (A0, 5 Colour)(1)	CANON
71.	Printer card	iR-1600 (CANON)
72.	RAM (512 MB to 1 GB)	Any good make
73.	Software Package	i) Statistically for Augmented Design (SPAD) ii) Statistical Package for Factorial Experiments (SPFF 1.0) iii) Statistical Package for Balanced Incomplete Block Design (SPBD)
74.	SPAR-1 Software for Data Analysis	IASRI Supply
75.	Statistical software package, Design Expert 7	
76.	Splitter with 10mts extension cord	Any good make
77.	UPS (500 VA)	APC/Epoch or any good make.
78.	Cordless mini mouse	Any good make
79.	SERVER	ProLiant ML 11 OG3 I Un i-Processor Capable I Intel E7230 server chipset I P4 3.0GHz(800MHz FSB) with 2048KB L2 Cache I 512MBx1 PC2 4200 DDR II memory I Single Channel Ultra320 SCSI Adapter/ 36GB Non-Hot Plug SCSI HIJD /3-1-1 warranty And any other specification
80.	SERVER	IBM Base server, X series 336m (8837i76) or its equivalent
81.	Windows XP Professional	

L. Spare parts of Computer(For DEE)

Sl. No.	Items	Make
82.	RAM DDR-2 (1GB), Box Pack	HYNIX
83.	RAM DDR-2 (1GB), Box Pack	HYNIX
84.	RAM (SD 256 MB)	HYNIX
85.	DVD Writer	LG/LITEON

86.	FIREWARE CARD (IEE-1394)	TECHCOM/INTEX
87.	HDD SATA (250 GB)	SEGATE-7200 RPM
88.	HDD PATA (250 GB)	SEGATE-7200 RPM
89.	Mother Board (INTEL 945) with PCIe slot	
90.	Pentium IV Dual Core 3 Ghz	Intel
91.	PCIe Graphic card (512 MB)	
92.	TFT Monitor 17"	LG/SAMSUNG
93.	Cabinet including SMPS	Intex / Any good make
94.	Web Cam.	Microsoft / Logitech
95.	Capture card Pinnacle GB 500	
96.	Speaker (501 CH)	Creative / Logitech
97.	Multimedia Key Board and Mouse	Microsoft / Logitech

Sl. No.	Items	Make
98.	Public Address System for conferencing	Ahuja

M. OTHER ITEMS FOR COMPUTER

Sl. No.	Items	Make
99.	CD – R(25 pack.x10)	Any good make
100.	CD – RW(25 pack.x10)	Any good make
101.	CD cover(50)	Any good make
102.	CD mailer(100)	Any good make
103.	CD-wallet(10)	Any good make

Works: **Computerization and Networking** for campus wide connectivity on fiber and structured cabling and Internet Security solutions, on turnkey basis.
Interested bidders may visit the site of work before 21st March, 2007. For details please see below:-

Sealed Quotations are required for the following work to be executed at **Uttar Banga Krishi Viswavidyala, (address)** on a turnkey basis:

IMPORTANT INSTRUCTIONS:

1. Sealed quotations are invited from parties of repute for the above work at **Uttar Banga Krishi Viswavidyala**
2. **Supply, installation, testing and commissioning of equipments :** The bidder shall be responsible for the design, engineering, supply, transportation, insurance, delivery at site, complete supervision, installation, testing and successful commissioning of all the supplied equipment, systems, their integration and proper operation.

3. Any item not specifically mentioned, but is required to complete the project in all respects for its safe, reliable, efficient and trouble free operation shall also be taken to be included, and the same shall be supplied and installed by the company without extra cost, unless explicitly excluded.
4. The company shall be responsible for providing all the required manpower and testing/ commissioning tools for the safe, reliable, proper and correct installation, commissioning and operation of the project.
5. **Warranty Clause** : All supplied equipments shall be covered under warranty for a minimum period of three (3) years from the date of successful installation and commissioning. The company shall be responsible for necessary preventive or breakdown maintenance as required during the warranty period, including service and repair/ replacement and ensure trouble-free operation within the stipulated response time and time to service.
6. **Support Response Time and Time to Service** : Support response time during warranty should not exceed 2 working days from the date of logging of complaint. Time to service the complaints during warranty should not exceed 5 working days it is the responsibility of the bidder to provide alternate/ spare equipment, if required, so that the system is restored to its normal operation within 5 working days from the date of logging of complaint.
7. **System upgrades** : The successful party shall be responsible to inform UPCL of the compulsory upgrades that may be necessary as per future technology and service requirements.
8. **Documents and Drawing** : The successful bidder shall provide all the required documents and drawings – with detailed schematic of the network, configuration of devices, firewall/router settings, IP addressing scheme, security parameters and checks incorporated, authentication/ authorization levels and system troubleshooting guidelines.
9. **Arrangement by the Contractor**: Contractor shall make his own necessary arrangements for setting up its Office and Store, if required, transportation, Board and lodging of their personnel and necessary tools and equipments required for installation, testing and commissioning.
10. **Training to UBKV faculty**: The contractor is required to provide training to the designated UBKV technical manpower in the basic concepts, administration, configuration and testing of Firewall/ Router and VPN, along with basic troubleshooting guidance. The contractor shall provide the write-up of training provided to trainees.
11. **Time schedule**: Time is the essence of the work under this contract. The job should be completed within 6 weeks from the date of issue of work order with all its functionalities and successfully put into operation. The bidder shall submit a detailed project plan, indicating the targets and time schedule for the completion of project, before start of the project to UPCL.
12. **Quality Assurance Plan** : All the activities required by the project should comply with the relevant quality standards and OEM's guidelines at each stage of the project. The bidder must submit the requisite quality/ security standards followed by him during the execution of the project.
13. **Quantity variation** : The quantity may vary upwardly to the extent of 50%. The bidder must agree to execute the project for the additional quantity variations, within the same rates, terms and conditions of the tender. Although

every additional item would be paid at an additional price as quoted in the contract.

14. **Price validity:** The bidder must keep the tendered prices of BOQ items valid for a period of at least 90 days from the date of opening of price bid.

15. **Payment terms :** The payment terms shall be as follows:

Running Bill may be allowed on satisfactory work

NOTE: Since UBKV is also entitled for purchase on dollar billing due to exemption of customs duty, the material purchased on dollar billing will be paid 100% advance via T.T. or Bank Instrument.

Technical Specifications:

Part A: Security Gateway Specifications (Firewall, Intrusion Detection Prevention, VPN)

The Internet Gateway Appliance should be based upon Pentium PIV 2.8 GHz processor or better, 3GB RAM, 4 Ethernet ports for different zones, 160 GB Hard disk with secure and hardened operating system capable of following features

FIREWALL

- a. Stateful packet filtering on basis IP address, Ports and IPs grouped as Network objects
- b. Application level packet filtering for over 100 TCP/IP based applications
- c. Capable of binding physical MAC address to an IP address for tighter security
- d. Capable of blocking broadcast traffic as per policy like DHCP , ARP filter , Blacklists
- e. Firewall throughput : 150 Mbps
- f. Should support upto 200 users
- g. Network translation engine should support Source NAT, Destination NAT and Port Address translation
- h. Supports static routes for other networks on LAN side to connect
- i. Prevents or allows IP tunneling
- j. Disables source routing

NETWORK BASED INTRUSION PREVENTION SYSTEM

- a. More than 2000+ intrusion prevention signatures
- b. Prevention of major outside attacks like DDOS , ICMP , Bad traffic
- c. Prevention against Hacking , Viruses , Worms and Trojans
- d. Regular updates of IPS signatures
- e. Definable attack signatures
- f. DMZ Zone for traffic Scanning
- g. Logs on attacks

NETWORKING

- a. Transparent Rules

- b. MSN ,Yahoo block
- c. DHCP & Caching DNS Server
- d. Dual WAN for dual ISP links
- e. ISP failover and Load sharing
- f. High Availability Solution using dual links
- g. Wireless LAN support via Access Point .

VPN

- a. Supports Both IPSEC and PPTP VPN .Both Clientto-Site Mode and Site-to-Site Mode
- b. X.509 Digital Certificates and Preshared Keys
- c. More than 200+ concurrent Sessions
- d. Encryption 3DES , RC4 , SHA-1 , MD-5 , ESP ,AH etc
- e. Supports WinXP and Standard IPSEC compliant clients
- f. Compatible with other IPSEC VPN gateways and provides IPsec failover feature for redundancy
- g. Permits IPsec session behind NATTed IPs
- h. Complete VPN logs

Administration

- a. Web Based GUI console
- b. Remote Management

Logs & Reports

- a. Graphical Bandwidth reports
- b. Attack Logs
- c. Periodic Firewall , IPS, Mail , Proxy logs
- d. Key String Search
- e. Security Reports for Suspicious activities
- f. Logging of Intrusions

Maintenance

- a. Backup and restore of complete configuration
- b. Automated Updates over the Internet
- c. Remote management Via Https
- d. SSH encryption
- e. Complete Network Diagnostic

Part B: Centralized Secure Proxy Server Specifications

The centralized secure proxy server appliance should be based upon Pentium PIV 2.8 GHz processor or better, 3GB RAM, 4 Ethernet ports for different zones, 160 GB Hard disk with secure and hardened operating system. This appliance should share the Internet links securely and should ensure that students are not using non work related offensive web sites. It should also safeguard from Viruses, Worms and Trojans present on the Internet.

- a. The appliance should have definable size of Internet cache for caching regularly visited websites for better speeds
- b. The appliance should provide gateway level anti virus for the Internet traffic like http and ftp
- c. Bandwidth Utilization Graphs (like MRTG) of Multiple ISP Links on Day, Month, Week, Yearly basis should be available
- d. Web-based & secure console based remote administration
- e. The web access Policies based on time quota (ex: 100 Hours, 200 Hours) should be possible based on Individual Users & Groups
- f. Policies to control Internet access time for users & groups should be available based on time and days of week. (ex: Internet access to be only allowed to specific users or group during Working hours 9:00 AM to 6:00 PM from Monday to Saturday)
- g. The appliance should have integrated Bandwidth Management
- h. The appliance should support to set guaranteed and burstable bandwidth per User and group of Users
- i. The appliance should be able to set policies based upon IP addresses and port numbers
- j. The proposed system should have integrated Web Filtering solution in the appliance
- k. Websites & relevant blocking information should be locally stored inside the Appliance & it should not query third party or Remote Hosted Servers on Data centres
- l. Appliance should have facility to block Web based upload of file attachments
- m. The web content filtering solution should also be able to work as an independent HTTP proxy server
- n. The proxy server should also support safe port option, by which certain ports can be blocked within proxy
- o. Blocking of websites should take place on defined expressions or on basis of any 3rd party database
- p. Should have support for URL exclusion list based on regular expressions
- q. Should be able to identify URL Translation Web server and block requests to such servers
- r. Should be able to log and report usernames, request IP address, domain name, URL, website category and category type
- s. Should be able to block famous chat and instant messaging communication like yahoo, jabber, msn, AOL messenger etc and other applications based on signatures and independent of ports.
- t. It should also a stateful packet filter & application layer firewall
- u. It should provide statistical and graphical logs of the Internet usage
- v. It should be able to remotely manage the appliance and correct the problems encountered
- w. New firmware should be upgradeable either on-line through the patch with a provision to revert back to the older firmware
- x. The appliance should have network, proxy and traffic testing tools

Part C: Specifications of Secure Mail Server Solution

The Secure Mail server appliance platform should be based upon Pentium PIV processor or better in server class 1U construction, with 3GB of RAM and 160 GB of storage

- a. Multi-domain mail server with on-line & offline capability
- b. It should also be able to fetch mails from other hosted mail servers
- c. Protocols supported POP3/SMTP/IMAP
- d. It should support all popular email clients like Microsoft Outlook, Netscape and Lotus notes etc.
- e. Should support upto 200 users
- f. It should be possible to categorize the users into categories department wise as well as student group wise or categories like all
- g. Capability to backup all incoming & outgoing mails through a single backup or administrative mail account
- h. Based upon categories, it should support attachment size checks and attachment file check i.e. Only System administrator is able to receive *.exe or attachment size beyond 5MB
- i. The appliance should support guaranteed bandwidth for Email applications
- j. Email server should only accept mails for domain internally from defined trusted IP addresses
- k. Email server should have a well managed queue for handling mails
- l. Email should accept mails at defined rate to ensure that Virus generated mails don't choke the network
- m. For outside authorized users or traveling users, it should provide secure VPN connectivity to check mails
- n. User defined file type for gateway file blocking should be possible
- o. Mail server should have a firewall and allow access to authorized & defined users
- p. Users should have authorized access to let them change their passwords
- q. Every email and administrative access should be automatically logged
- r. Mail server should have powerful gateway level anti virus system to block email based viruses.
- s. Email server should have powerful Anti Spam control based upon the following
 - i. Definable RBL list based upon Mail signatures, DCC and Razor checks
 - ii. Automatic learning system
 - iii. Reverse DNS checks for incoming mails
 - iv. Check based on images against defined keyword
 - v. Text based keywords definition to block the mails having that keyword
 - vi. Score based Anti Spam check
- t. Mail server appliance should be able to generate warning for potential Phishing threats
- u. Quarantine areas for both Virus infected and Spam mails with a provision to retrieve required mail
- v. Alerts on Virus infected and Spam mail to administrator
- w. Graphical & statistical logs on both incoming and outgoing mails
- x. Reports like total mails received, total virus mails & spam mails graphical
- y. Email quota space utilization by individual users

- z. It should be possible to delete old log information and quarantine virus and spam mail as per policy
1. The mail server appliance should support Advanced Bayesian Filters
2. It should also support user defined Blacklist , Whitelist
3. Mail server appliance should be able to block wrong HTML (with inappropriate tags) mails
4. Quarantine Spam Mail should have options like Store , Deliver , Retrieve , Delete Options

Part D:

Aggregation Switch:

12 SFP-based Gigabit Ethernet ports

Features	<ul style="list-style-type: none"> ? 12 SFP-based Gigabit Ethernet ports ? 32-Gbps, high-speed stacking bus ? Innovative stacking technology ? 1 rack unit (RU) stackable multilayer switch ? Delivers enterprise-class intelligent services to the network edge ? EMI installed ? Provides full dynamic IP routing
Performance	<p>32-Gbps switching fabric</p> <p>Stack-forwarding rate of 38.7 mpps for 64-byte packets</p> <p>Forwarding rate: 15 mpps or more</p> <p>128 MB DRAM and 16 MB Flash memory</p> <p>Configurable up to 10,000 MAC addresses</p> <p>Configurable up to 10,000 unicast routes</p> <p>Configurable up to 1000 IGMP groups and multicast routes</p> <p>Configurable maximum transmission unit (MTU) of up to 9000 bytes, with a maximum Ethernet frame size of 9018 bytes (jumbo frames) for bridging on Gigabit Ethernet ports, and up to 1546 bytes for bridging and routing on Fast Ethernet ports</p>
Connectors and Cabling	1000BASE-SX, -LX/LH, -ZX, and CWDM SFP-based ports: LC fiber connectors (single-mode, or multimode fiber)
Indicators	<ul style="list-style-type: none"> • Per-port status LEDs: link integrity, disabled, activity, speed, and full-duplex indications

	<ul style="list-style-type: none"> • System-status LEDs: system, RPS, and bandwidth-utilization indications
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Part E:

Core Switch: 24 Ethernet 10/100/1000 ports and four SFP uplinks

Features	<ul style="list-style-type: none"> • 24 Ethernet 10/100/1000 ports • 4 SFP-based Gigabit Ethernet ports • 32-Gbps, high-speed stacking bus • Innovative stacking technology • stackable, multilayer switch • Enterprise-class intelligent services delivered to the network edge • IP Services image installed • Full IP routing with BGPv4, EIGRP, OSPF, and PIM
Performance	<ul style="list-style-type: none"> • 32-Gbps switching fabric • Stack-forwarding rate of 38.7 mpps for 64-byte packets <p>Forwarding rate: 35.7 mpps or more</p> <p>128 MB DRAM and 32 MB Flash memory</p> <p>Configurable up to 10,000 MAC addresses</p> <p>Configurable up to 10,000 unicast routes</p> <p>Configurable up to 1000 IGMP groups and multicast routes</p> <p>Configurable maximum transmission unit (MTU) of up to 9000 bytes, with a maximum Ethernet frame size of 9018 bytes (jumbo frames) for bridging on Gigabit Ethernet ports, and up to 1546 bytes for bridging and routing on Fast Ethernet ports</p>
Connectors and Cabling	<ul style="list-style-type: none"> • 1000BASE-T ports: RJ-45 connectors, 2-pair Cat-5 UTP cabling • 1000BASE-SX, -LX/LH, -ZX, and CWDM SFP-based ports: LC fiber connectors (single-mode, or multimode fiber) • StackWise stacking ports: copper-based

	<p>StackWise cabling that is also compatible with the StackWise Plus technology</p> <ul style="list-style-type: none"> • Management console port: RJ-45-to-DB9 cable for PC connections
Indicators	<ul style="list-style-type: none"> • Per-port status LEDs: link integrity, disabled, activity, speed, and full-duplex indications • System-status LEDs: system, RPS, and bandwidth-utilization indications

Part F: Edge Switch: 24 Ethernet 10/100/1000 ports and 4 SFP-based Gigabit Ethernet ports

Features	<ul style="list-style-type: none"> • 24 Ethernet 10/100/1000 ports and 4 SFP-based Gigabit Ethernet ports • 1RU fixed-configuration, multilayer switch • Enterprise-class intelligent services delivered to the network edge • IP Services license (formerly EMI) installed • Advanced IP routing
Performance	<ul style="list-style-type: none"> • 32 Gbps forwarding bandwidth • Forwarding rate based on 64-byte packets: • Minimum 35 Mpps 128 MB DRAM 32 MB Flash memory Configurable up to 12,000 MAC addresses • Configurable up to 11,000 unicast routes • Configurable up to 1000 IGMP groups and multicast routes • Configurable maximum transmission unit (MTU) of up to 9000 bytes, with a maximum Ethernet frame size of 9018 bytes (Jumbo frames), for bridging on Gigabit Ethernet ports, and up to 1546 bytes for bridging of Multiprotocol Label Switching (MPLS) tagged frames on 10/100 ports
Connectors	<ul style="list-style-type: none"> • 1000BASE-T ports: RJ-45 connectors,

and Cabling	four-pair Category 5 UTP cabling <ul style="list-style-type: none"> • 1000BASE-SX, -LX/LH, -ZX, and CWDM SFP-based ports: LC fiber connectors (single/multimode fiber) • Management console port: RJ-45-to-DB-9 cable for PC connections; for terminal connections, use RJ-45-to-DB-25 female data-terminal-equipment (DTE) adaptor
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Part G:

Small Form Factor pluggable Trans receiver module

Operates on standard single-mode fiber-optic link spans of up to 10 km and up to 550 m on any multimode fibers.

Part H: Fiber cable

Fiber Cable

- 6 Core Fiber Cable\
- Single Mode Fiber to support 1310 nm & 1550 nm wavelengths, 9/125 micron graded index, anti rodent, fibre should be protected inside jelly filled loose tube armoring with acrylic coated good quality steel, should conform or exceed the EIA/TIA 455, EIA/TIA 568 , ISO 11801 & ICEA-640 standards for Fiber and cable performance specifications.
- Attenuation : not more than 0.38 dB/km at 1310 nm and 0.25 dB/km at 1550 nm
- Different tube colour coded for easy identification.
- ECCS armour followed by a jacket of polyethylene. Over the armour, water blocking powder applied for water tight cable.
- * The fiber core should be ITU 652D specification, should support 10Gbps.
- Should have dual jacket, HDPE inner jacket and PE Outer Jacket with UV compliant. The OD should be 15.2mm

Optical characteristics

Parameter / Unit / specification

1. Cladding Diameter / μm / 125.0 ± 1.0
2. Cladding Non-Circularity / % / $= 1.0\%$
3. Coated Fiber Diameter / μm / 235 to 255
4. Core/Cladding Concentricity Error / μm / $= 0.8$
5. Mode Field Diameter / μm / 9.3 ± 0.5 @ 1310 nm
6. Coating/cladding concentricity error / μm / $= 12$
7. Minimum Proof Strength Strain / GPa% / 0.70 (100 kpsi)
8. Fiber Curl / M / > 4
9. Zero-Dispersion Wavelength / Nm / 1300 to 1324
10. Zero-Dispersion Slope / ps/nm²km / $= 0.092$

11. Maximum Dispersion / ps/nm-km
 1285-1330 / = 3.5
 1550 nm / = 18
12. Polarization Mode / ps/km / = 0.2
 Dispersion Coefficient / @ 1310 nm & 1550 nm
13. Fiber Macrobend / dB / = 0.05@ 1310 nm
 (100 turns. 60 mm dia.) / = 0.10@ 1550 nm
14. Fiber Macrobend / dB / = 0.5 @ @ 1550 nm.
 (1 turn @ 32 mm diameter)
15. Coating Strip Force / N / 1.3 = F = 8.9
16. Dynamic Tensile Strength / Kpsi / Unaged :>550 (3.8 GPa)
 Aged :>440 (3.0 GPa)

2. Fiber Patch Panle (LIU)

- Mode availability 1 2 Port and 24 Port Fiber Patch Panel
- Rack mount with 1 U height
- Made of powder coated steel.
- Have slots on front panel to accommodate SC adapters
- Should have fiber management provision inside
- Should have earthling lugs, splicing tray with sleeves, two set of moon cable routing and other accessories.
- Panel cover should be slide out for easy maintenance
- Dimensions : 19" X 11" X 1 U Approx.

3 Fiber SC Adaptors

- To be fitted in the Supplied LIU
- Dimensions : 0.71"X0.37"
- Singlex SC Adaptor with Zirconia Sleeve

4 Fiber Patch Cord

4.1 Fiber Patch Cord SC-SC

- SC to SC
- 9/125 micron SM fiber
- Duplex
- 3 meter in length

4.2 Fiber Patch Cord SC-LC

- SC to LC
- 9/125 micron SM fiber
- Duplex
- 3 meter in length

5 . Fiber Optic Connectors

Connector Type:- SC-Style, Simplex
 Operating temperature:- -40 Degree C to +85 Degree C
 Durability & color
 MM connectors:- 500 cycles, Beige
 SM connectors:- 220 cycles, Blue
 Ferrules:- Pre-radiused Ceramic Ferrules
 Attenuation:- Not more than 0.75 dB per mated pair

Part I:

I. Copper Cabling

I.1 CAT 6 Cable

- Standard Length : 305 Meters (1000 Feet)
- 4 Pair Twisted Cable
- Tangle free cable pack in pull free corrugated box
- Support for Fast and Gigabit Ethernet, IEEE 802.3/5/12, Voice, ISDN, ATM 155 & 622Mbps.

• Physical Specification :

- o Conductor : 23 AWG Annealed bare solid copper
- o Insulation : High Density Polyethylene
- o Core Colour : Pair 1 : White - Blue
- o Pair 2 : White - Orange
- o Pair 3 : White - Green
- o Pair 4 : White - Brown
- o Sheath : Fire Retardant PVC Compound (FRPVC)
- o Approx. Cable OD : 6.2 mm
- o Sheath Colour : Grey

o Operating Environment : Indoor

o Flame Rating : 60 deg.C As per UL 1685 CM

• Electrical Specification : (at 250 MHz)

o Standards : TIA / EIA 568 B.2 -1

o Impedance : 100 +/- 15 ohm

o (NVP) Velocity of Propagation : 62.10% min. @ 250 MHz Approx

o Delay Skew : 45 ns /100 mtrs. max. @ 20 deg. C, for 1 MHz~250 MHz Approx.

o Propagation Delay : <=536 ns / 100 mtrs. max. @ 20 deg. C, @ 250 MHz

o DC Resistance: <= 9.38 ohm / 100 mtrs. max. @ 20 deg. C

o Mutual Capacitance: 5.60 nF / 100 mtrs. max. Approx

I.2 Patch Panel 24 Port

- Rack Mount 24 Port Patch Panel
- 110 wiring block at rear end & RJ 45 jack on front panel
- The modules should have high quality PCB
- The IDC should have 45 degree contact
- 19" rack mountable
- should conform or exceed the EIA/TIA 568 B.2-1 standards for CAT6
- Metallic high strength & 1U height, should have routing rings, ties, labeling strips for identification

I.3 CAT 6 UTP Patch Cord

I.3.1 Patch cord 3 Feet

- Should conform or exceed the EIA/TIA 568 B standards for CAT 6 Factory molded boots on RJ 45 plugs at both ends
- compliance with Cat 6 standards of ISO/IEC 11801, EIA/TIA 568, EN50173 and UL, ETL,3P
- Length - 3 feet/1m

- Should have flexible Molded Boot

I.3.2 Patch cord 7 Feet

- Should conform or exceed the EIA/TIA 568 B standards for CAT 6 Factory molded boots on RJ 45 plugs at both ends
- compliance with Cat 6 standards of ISO/IEC 11801, EIA/TIA 568, EN50173 and UL, ETL,3P
- Length – 7 feet/2m
- Should have flexible Molded Boot

I.4 CAT 6 Information outlet single surface mount with shutter

- Cat 6 IDC type Keystone Jack (Female RJ45 Jack)
- Performance to met TIA/EIA-568-B.2-1 specifications
- Shuttered mount wall plate to hold Keystone jack Cat 6 modules
- Side entry type for better maintaining of bend radius.
- Should be compatible for both 110 and krone type tool.
- IDC should have 45 degree contact
- Tough shatter resistant PVC
- Designed for ease of use
- Uncluttered internal design

Part J: Networking Racks:

SPECIFICATION FOR EACH FLOOR STANDING RACK		
Usage Requirements		IT Equipments
RACK		
Size	Usable Height 42U, Overall Width 800mm & Depth 1000mm	
Load Bearing Capacity	Effective load carrying capacity not less than 500 kg.	
Load bearing member	Heavy Grade Aluminium profile with foot print of 47 X 50 mm and wall thickness 2mm Both Front & Rear doors in closed position should snugly fit within the profile.	
End Frames	80mm, Sectional frames with 5 bends of CRCA 16SWG, welded at corners, Depth 954 and width 747, dual bolts at each corner.	
Top Cover	Removable and vented top cover for allowing heat conduction with provision for mounting fan housing unit. The top cover should have provision of cable entry provision from rear side.	
Bottom Cover	Bottom cover should have gland plate with cable entry cut out.	
Side panel	1/3 vented at bottom, with double fold bend and stiffeners of 50 mm running through the entire height of the side panel from the top to bottom. Removable with slam latches. 2 Nos.	
Front Door	Steel front Door with hexagonal / honey-bee comb type server grade perforation in 2/3 area should have lock and has to open to approximately 110 degree on the outside.	
Rear Door CRCA	Steel rear Door with hexagonal / honey-bee comb type server grade perforation in 2/3 area should have lock and has to open to approximately 110 degree on the outside.	
Finish	All parts undergo powder coating using 7 tank or better process. The powder coating thickness of 60-80 Microns has to be maintained	
Colour	Powder coated with textured polyester Grey / Black	
Cable entry	Bottom and Top.	
Certification/Standard	The product should confirm to the following standard : DIN-41494, ANSI/EIA RS 310C and IEC 297	
ACCESSORIES		
1	U' Marked with square holes, Vertical Mounting angles	- 2 Pairs

2	800mm W to 19" mounting W reducing channel with cable loops in all 4 corners	-	1 Set
3	Power Strip 14 x 5A Indian Round Pin, Vertical with MCB and Indicator	-	2 Nos.
4	Equipment & monitor Shelf 19"W / 725mm D to take load of 50 Kg.	-	4 Nos.
5	Sliding tray 19" width for Key board & Mouse.	-	1 No.
6	Top Mounting - Fan Housing Cage, 4 Fan position	-	1 No.
7	Fan - 90 CFM, AC and dia of 4 inches (Make of the Fans – Micron, Rexnord, High cool)	-	4 Nos.
8	Hardware Front Panel, Pack of 20	-	2 Pkt.
9	Castor wheels without brake	-	2 Nos.
10	Castor wheels with foot operated brake	-	2 Nos.
11	Cable Manager 1U, 19" Mounting	-	1 No.
GENERAL REQUIREMENTS			
ISO	The Manufacturer should be certified by the "Bureau Veritas Quality International" i.e. the manufacturing facilities of the company should be "ISO 9001" certified		
Turnover	The Manufacturing Principle Company should be of a reputed status having a min. turn-over in excess of Rs. 25 Crores.		

Bill of Quantities (BoQ)						
Sr No	Item	Qty	Unit Price	Qty	Total Price (INR)	Total Price (USD)
1	Appliance based Firewall/IDS/IPS/VPN device (Part A)			1		
2	Appliance based Centralized Secure Proxy Server (Part B)			1		
3	Appliance based Secure Mail Server (Part C)			1		
4	Aggregation Fiber Switch (Part D)			1		
5	24 port Gigabit Layer-3 Switch (Part E)			1		
6	24 port Gigabit Switch (Part F)			11		
7	Fiber GBIC (Part G)			22		
8	Stacking Cable			1		
(Part H)						
9	OFC Cable			10000		
10	24 port LIU			1		
11	12 port LIU			11		
12	Fiber SC Adapters			22		
13	Fiber patch chord			22		
14	Fiber Optic connectors			22		
15	Adpater Plates			13		
CAT 6 (Part I)						
17	Cat 6 Box (305 m)			100		
18	Patch panel –CAT6 24 port			12		
19	CAT6 UTP Patch chord -3 feet			288		
20	CAT6 UTP Patch chord -7 feet			288		
21	CAT6 Single I/O with face Plate & SMB			288		
Networking Rack (Part J)						
22	19" 42U Rack			1		
23	19" 9U Rack			11		
Labour Charges						
24	PVC pipe /batton (double lock)			Per m costing		

25	Cable Pulling (per meter)			Per m costing		
26	I/O Termination (per termination)			288		
27	PVC conduit laying on surface(per meter)			Per m costing		
28	PVC Batons laying on surface (per meter)			Per m costing		
29	Patch Panel Termination (per panel)			12		
30	Labeling & Feruling (per node)			288		
31	Rack Mounting (per rack)			12		
32	Penta Scannning per node			288		
33	Laying of OFC along with pipe laying(per m)			Per m costing		
34	Digging in outdoor (per m)			Per m costing		
35	Splicing (per core)			187		
36	OTDR Testing			187		

1.	Electronic Balance	Any good make
2.	Distillation Set	Any good make
3.	UV Spectrophotometer	AIC make/ Any good make
4.	Spectrophotometer	Any good make
5.	Rice Sizing Device (Big)	Any good make
6.	Computerized seed dryer	Any good make
7.	Foot sprayer	Any good make
8.	Control Symothera storage structure	Any good make
9.	Rice Testing Mill (Rice Polisher)	Any good make

Terms & Conditions:

1. Suppliers / bidders will be allowed to present their specifications and other details of the instruments / works at UBKV, Pundibari on or before 21st March, 2007 also. Contact phone for early presentation 03582-270157/270586/270588.
2. Quotations must be submitted in a sealed cover with broad heading and Sl. No. mentioning Works/ Equipment/ Furniture /Chemicals/ Computer etc. separately on the top of the envelop.
3. Rates should be quoted in order of serial numbers of articles mentioned in the list provided.

4. In case of Chemicals and Glass goods / Plastic wares the supplier may mention the extent discount over the listed prices for each company.
5. University has the DSIR certificate for duty exemption and authorized to issue D form.
6. Rate should be quoted with all applicable taxes and incidental charges per item basis.
7. Sales tax and other taxes to be charged as per norms should be specifically mentioned.
8. Guarantee period for each item and nature and period of after installation/Sales and service facilities should be mentioned clearly.
9. The firms should submit evidence that they have supplied / installed at reputed organization in the past.
10. Instruments/materials should confirm to minimum specifications given. If felt necessary, performance of the instrument(s) will be required to be demonstrated in front of team of experts to be formed by the University and **if found not upto required standard, the same will be returned at the cost of the bidder and must be replaced within 15 days of the incidence.**
11. More than one specification for a single item may be mentioned with rate.
12. Copy of current tax clearance certificate (Income tax/Sales Tax/Professional Tax) and Dealership /Manufacturing/SSI certificate should be attached with quotations.
- 13. University shall open L.C. for foreign instruments (if required) and the fund will be released after installation of the equipment at the University.**
- 14. The University reserves the right to reject or accept any or all tenders without giving any reason whatsoever.**

Date: 09.03.2007

Registrar